

xvi. Quench Link

The quench link is a ring wide interlock system that connects all the power supplies, quench detectors, and quench protection systems together. It is part of the permit module of the control system. It has two independent channels, one for the Yellow ring and one for the Blue ring. The input to the quench link goes low when a quench is detected or power supply or QPA or SCR switch develops a fault. This then causes the link's output to go down around the whole ring. When the link's output goes down it causes all the power supplies to shut off and all the quench protection switches to open up. The quench protection switches place energy extraction resistors in series with the superconducting circuits. This causes the current in the circuits to decay to safe levels. The quench link inputs are time stamped. The quench links are located in every service building and all the center alcoves of the ring.